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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,545	02/05/2004	Raghu Raghavan	SCHWP0212US	2815
7590 04/18/2007 Don W. Bulson, Esq. RENNER, OTTO, BOISSELLE & SKLAR 19th Floor 1621 Euclid Avenue Cleveland, OH 44115			EXAMINER ROSARIO, DENNIS	
			ART UNIT 2624	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			04/18/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/771,545	RAGHAVAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dennis Rosario	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/5/04 7/6/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 4 has the limitation of "introduced into the body by accident" which is not clearly defined in the specification. Please clarify what the claimed "accident" is.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Keane (US Patent 6,381,562 B2).

Regarding claim 1, Keane discloses a computer-implemented method of dynamically modeling and displaying (via fig. 2,num. 256) a passage of information ( upon the output of fig. 2,num. 255 that represents a "hormone...working its way through the circulatory system..." in col. 31, lines 32,33) between at least two spatially distributed objects in a body ("hypothalamus...kidneys" in col. 31, lines 27-33).

Claims 2,3 are rejected the same as claim 1. Thus, argument similar to that presented above for claim 1 is equally applicable to claims 2,3.

Regarding claim 5, Keane discloses the method of claim 1, wherein at least one spatially distributed object represents material introduced into the body by an aggressor (or "viruses" in col. 11, line 6).

Regarding claim 6, Keane discloses the method of claim 1, wherein at least one spatially distributed object represents material introduced into the body for cosmetic purposes (as performed by a "surgeon" in col. 5, line 25).

Claim 4 is rejected the same as claim 5. Thus, argument similar to that presented above for claim 5 is equally applicable to claim 4.

Regarding claim 7, Keane discloses the method of claim 1, wherein at least one spatially distributed object is represented as having a spatial form (since the kidney is a physical object) and points of contact (or "receptors" in col. 31, lines 27,40) with other objects (said hypothalamus).

Regarding claim 8, Keane discloses the method of claim 7, wherein at least one spatially distributed object has a geometrical description of a three-dimensional form (via a "3D graphics displays" in col. 8, lines 23,24 and "1-,2-, or 3-Dimensions" in col. 13, line 3).

Claims 9-12 are rejected the same as claim 8. Thus, argument similar to that presented above for claim 8 is equally applicable to claims 9-12.

Regarding claim 13, Keane discloses the method of claim 1, wherein at least one spatially distributed object contains a numerical description (or "size parameter" in col. 9, lines 52,53 or "grey scale" in col. 10, line 16 which is a scale of numbers) of the condition of the at least one spatially distributed object.

Regarding claim 14, Keane discloses the method of claim 13, wherein the numerical description comprises:

a) lesions (or "clots" in col. 11, line 7) of medically recognized types in a tissue represented by the at least one spatially distributed object.

Regarding claim 15, Keane discloses the method of claim 13, wherein the numerical description may refer to the states at particular spatial locations (or "concentration of a chemical at each element location" in col. 10, lines 14,15) within the at least one spatially distributed object.

Regarding claim 16, Keane discloses the method of claim 1, wherein a signal (or said hormone) passed between a first spatially distributed object (or said hypothalamus) and a second spatially distributed object (said kidney) depends upon the internal state of the first spatially distributed object and the second spatially distributed object (or "production...of a hormone" in col. 31, line 30 of said hypothalamus or "adsorp-tion of water" in col. 31, lines 35,36 of said kidneys), and upon an algorithmic specification (via fig. 9) characterizing the transfer capacity between the first spatially distributed object and the second spatially distributed object.

Claim 17 is rejected the same as claim 16. Thus, argument similar to that presented above for claim 16 is equally applicable to claim 17.

Regarding claim 18, Keane discloses the method of claim 16, wherein the algorithmic specification is obtained by a user (via fig. 1,num. 103) and connected to a digital implementation of the method by programming means.

Claims 19,20 are rejected the same as claim 16. Thus, argument similar to that presented above for claim 16 is equally applicable to claims 19,20.

Regarding claim 21, Keane discloses the method of claim 1, wherein

a) at least one spatially distributed object (or “organ elements” in col. 9, lines 9,10) is grouped as a different spatially distributed object (via a “dictionary” in col. 9, line 7 that is used to identify organ elements), and

b) at least one algorithm (fig. 2,num. 204) associated with the different spatially distributed object is run on data (fig. 2,num. 251) associated with the different spatially distributed object to approximate the effect of the at least one algorithm on the data associated with the at least one spatially distributed objects.

Regarding claim 22, Keane discloses the method of claim 1, wherein a geometrical description (or “simulator configuration” in col. 9, line 49) is modified (or “changed” in col. 9, line 50) by a global transformation (or “scaled” in col. 9, line 53) specifying a correspondence (in “proportion” in col. 9, line 53) between a reference coordinate space of the method and a coordinate space appropriate to a particular subject (“organism size” in col. 9, line 52).

Regarding claim 23, Keane discloses the method of claim 1, wherein a geometrical description (or “model” in col. 9, line 47) may be modified individually (or “scaled” in col. 9, line 52) to better match a corresponding entity in a particular subject to create a new hypothetical example.

Claim 24 is rejected the same as claim 16. Thus, argument similar to that presented above for claim 16 is equally applicable to claim 24.

Regarding claim 25, Keane discloses the method of claim 1, further comprising:

- a) specifying an initial condition (via fig. 2,num. 253) of at least one spatially distributed object;
- b) running at least one associated algorithm (fig. 2,num. 204) while continuing to intervene (via fig. 4,num. 405) in the state of the at least one spatially distributed object in real-time (since fig. 4 is a detailed view of fig. 2,num. 204 at a specific TIME STEP as shown in fig. 4); and
- c) observing results (fig. 4,num. 413).

Regarding claim 26, Keane discloses the method of claim 1, further comprising:

- a) running at least one associated algorithm (or "simulation model" in col. 6, line 10) on a system that resides on a central server ("server computers" in col. 13, lines 31,32); and
- b) having a user issue modification and simulation commands (via fig. 1,num. 103) over the Internet ("Internet" in col. 6, line 30) which are executed on the central server.

Regarding claim 27, Keane discloses the method of claim 1, further comprising:

- a) having a user obtain standard system data (via fig. 2, num. 253); and
- b) having the user issue modification (as represented in fig. 2 as num. 254) and simulation commands that are executed on a computer.

Claim 28 is rejected the same as claim 8. Thus, argument similar to that presented above for claim 8 is equally applicable to claim 28.

Regarding claim 29, Keane discloses the method of claim 28, where the three-dimensional graphical image is color-coded ("color-coding" in col. 10, line 16).



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Regarding claim 30, Keane discloses the method of claim 27, further comprising displaying results as numbers ("display...pressures...in tabular [form]" in col. 10, lines 1-4).

Regarding claim 31, Keane discloses the method of claim 24, where a second program (fig. 2,num. 212) issues modification and simulation commands (fig. 5,numerals 510 and 511) and receives data (via fig. 2,num. 204) describing the results of system computations as input for further computations by said second program.

Regarding claim 32, Keane discloses the method of claim 1, wherein the information comprises at least one of a group consisting of:

- a) material ("water" in col. 31, line 28); and
- b) signals.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Goetz et al. (US Patent 7,182,933 B2) is pertinent as teaching a method transferring information via a Drug Carrier to Irradiated Endothelium as shown in fig. 1. This reference is applicable to claim 1.

Grand (US Patent 6,446,055 B1) is pertinent as teaching a method of transferring information or communicating using sockets and plugs of a body.

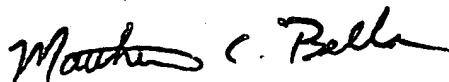
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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
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